

## ABSTRACT

The motor/generator according to this invention is provided with a first rotor (23), a second rotor (21) and a stator (22) provided with a plurality of stator coils (1-6). The first rotor (23) is provided with magnetic poles by a magnet. The second rotor (21) is provided with magnetic poles by a magnet and a plurality of rotor coils (A-D). The motor/generator functions as a magnetic coupling by creating an equal number of magnetic poles in the first rotor (23) and the second rotor (21). When the first rotor (23) and the second rotor (21) are rotated by supplying a polyphase alternating current to the stator coils (1-6), a part of the rotor coils (A-D) are excited and the number of magnetic poles of the second rotor (21) is varied to allow independent rotation of the first rotor (23) and the second rotor (21).